

Mineral Industry Surveys

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COBALT IN SEPTEMBER 2005

U.S. cobalt consumption during the quarter ending September 30, 2005, was nearly equal in amount to that consumed during the quarter ending June 30, 2005, according to the U.S. Geological Survey. U.S. cobalt consumption during the first three quarters of 2005 was 3% higher than that consumed during the first three quarters of 2004.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 35% higher during January through August 2005 than that of imports during the same period in 2004. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 13% lower during January through August 2005 than that of exports during the same period in 2004. Trade data for September 2005 will be available in a subsequent issue.

Price

Prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
November 3	12.05-13.30
November 10	12.50-13.00
November 17	12.75-15.00
November 23	15.00-16.50
December 1	15.00-17.00

<u>Month</u>	<u>Average price</u>
October	14.17
November	13.76

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2004:				
September	246	165	191	602
October	318	156	192	666
November	277	161	187	625
December	268	166	198	633
January-September ^r	2,220	1,560	1,600	5,380
January-December ⁴	3,090	2,040	2,180	7,310
Year ⁵	4,110	2,040	2,300	8,450
2005:				
January	278 ^r	150 ^r	197 ^r	624
February	292 ^r	153 ^r	197 ^r	641
March	253 ^r	175 ^r	187 ^r	615
April	268 ^r	151 ^r	187 ^r	605
May	256 ^r	154 ^r	198 ^r	608
June	254 ^r	176 ^r	194 ^r	624
July	261 ^r	147 ^r	177 ^r	585
August ^r	276	151	201	628
September	261	159	201	622
January-September	2,400	1,410	1,740	5,550

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

⁵Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2004			2005	
	January- September ^r	January- December ²	Year ³	September	January- September ⁴
Steel	443	591	722	50	451
Superalloys	2,250	3,100	3,650	275	2,470
Magnetic alloys	260	351	396	21	175
Other alloys ⁵	W	W	627	W	W
Cemented carbides ⁶	572	764	765	64	573
Chemical and ceramic uses ⁷	1,660	2,220	2,230	189	1,680
Miscellaneous and unspecified	203	270	63	23	203
Total	5,380	7,310	8,450	622	5,550

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on monthly reports.

³Includes annual reports.

⁴Includes revisions to prior months' data.

⁵Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁶Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁷Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Industry ²				U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap	Total	
2004:					
September	352 ^r	188 ^r	85	625 ^r	2,700
October	331 ^r	210 ^r	93	634 ^r	2,700
November	350 ^r	208 ^r	103	661 ^r	2,700
December ⁶	352	203	115	670	2,660
Yearend ⁷	379	223	117	719	2,660
2005:					
January	347	200	107 ^r	654 ^r	2,590
February	349	210	108 ^r	667 ^r	2,540
March	344	195	105 ^r	643 ^r	2,340
April	341	208 ^r	110 ^r	659 ^r	2,220
May	351	199 ^r	108 ^r	658 ^r	2,180
June	347	186 ^r	101 ^r	634 ^r	2,070
July	370	201 ^r	114 ^r	684 ^r	1,930
August	341 ^r	191	132 ^r	664 ^r	1,870
September	348	187	132	667	1,810

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks reported by cobalt processors and consumers.

³Includes metal powder.

⁴Data may include other cobalt materials.

⁵Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁶Data based on monthly reports.

⁷Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2004:								
August	371,000	\$20,100,000	102,000	\$3,960,000	124,000	\$1,860,000	483,000	5,480,000
September	666,000	32,600,000	101,000	3,770,000	196,000	2,430,000	799,000	6,280,000
October	598,000	27,500,000	124,000	4,550,000	146,000	2,090,000	731,000	7,010,000
November	578,000	25,300,000	98,200	3,540,000	97,200	1,400,000	678,000	7,690,000
December:	907,000	35,300,000	90,400	3,020,000	175,000	2,290,000	1,030,000	8,720,000
January-August	4,500,000	190,000,000	884,000	30,200,000	1,100,000	13,900,000	5,480,000	XX
January-December	7,250,000	311,000,000	1,300,000	45,100,000	1,720,000	22,100,000	8,720,000	XX
2005:								
January	727,000	27,000,000	128,000	4,010,000	230,000	2,860,000	897,000	897,000
February	892,000	35,600,000	95,400	2,660,000	191,000	2,730,000	1,030,000	1,930,000
March	544,000	21,000,000	183,000	5,640,000	215,000	2,690,000	747,000	2,680,000
April	818,000	29,800,000	75,100	1,950,000	98,600	1,230,000	907,000	3,590,000
May	885,000	29,900,000	87,600	2,570,000	173,000	1,660,000	1,000,000	4,580,000
June	904,000	30,100,000	91,600	2,620,000	187,000	2,050,000	1,030,000	5,620,000
July	712,000	22,600,000	119,000	2,920,000	120,000	1,130,000	835,000	6,450,000
August:								
Australia	5,250	80,300	--	--	--	--	5,250	246,000
Belgium	16,400	700,000	44,300	1,070,000	--	--	48,200	541,000
Brazil	40,000	1,180,000	--	--	--	--	40,000	240,000
Canada	62,200	2,210,000	--	--	--	--	62,200	600,000
China	65,900	1,970,000	10,100	219,000	75,800	800,000	104,000	670,000
Colombia	--	--	--	--	651	2,500	176	527
Congo (Kinshasa)	--	--	--	--	--	--	--	19,900
Finland	26,400	835,000	9,970	213,000	43,400	554,000	50,900	665,000
France	1,640	124,000	4,890	220,000	--	--	5,160	37,200
Germany	--	--	--	--	--	--	--	7,810
Hong Kong	--	--	7,330	161,000	--	--	5,280	5,280
India	--	--	--	--	16,200	113,000	4,370	69,500
Japan	21,300	874,000	6,000	333,000	--	--	25,700	164,000
Korea, Republic of	197	12,300	--	--	--	--	197	23,600
Morocco	60,000	1,540,000	--	--	--	--	60,000	242,000
Norway	210,000	5,580,000	--	--	--	--	210,000	1,820,000
Philippines	--	--	--	--	14,100	220,000	4,770	22,800
Russia	224,000	6,200,000	--	--	--	--	224,000	952,000
South Africa	500	16,300	--	--	--	--	500	207,000
Sweden	3,210	26,200	--	--	--	--	3,210	6,310
Switzerland	--	--	--	--	--	--	--	2
Taiwan	100	5,400	--	--	--	--	100	1,740
Uganda	--	--	--	--	--	--	--	60,300
United Kingdom	1,000	39,100	--	--	--	--	1,000	159,000
Zambia	91,100	2,470,000	--	--	--	--	91,100	640,000
Total	829,000	23,900,000	82,500	2,210,000	150,000	1,690,000	946,000	7,400,000
January-August	6,310,000	220,000,000	862,000	24,600,000	1,360,000	16,000,000	7,400,000	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY ¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2004:						
August	949	\$62,800	118,000	\$1,380,000	9,380	\$858,000
September	7,310	106,000	39,400	411,000	29,500	1,760,000
October	5,710	318,000	55,400	579,000	11,300	856,000
November	6,500	366,000	38,200	366,000	38,900	2,570,000
December	1,650	76,700	93,600	815,000	27,500	1,990,000
January-August	54,300	2,340,000	790,000	8,690,000	123,000	8,270,000
January-December	75,500	3,210,000	1,020,000	10,900,000	230,000	15,400,000
2005:						
January	5,110	190,000	72,000	463,000	12,400	938,000
February	89	16,700	24,100	380,000	18,800	1,360,000
March	1,100	52,200	82,000	887,000	15,800	1,100,000
April	1,080	65,100	47,400	571,000	31,700	2,030,000
May	11,100	348,000	75,400	845,000	21,300	1,550,000
June	500	33,000	120,000	1,060,000	20,500	1,540,000
July	1,990	95,700	17,100	276,000	27,300	1,730,000
August:						
Austria	275	17,700	--	--	--	--
Canada	--	--	17,600	71,500	1,570	273,000
Finland	--	--	--	--	50	3,150
France	--	--	6,960	159,000	2,910	271,000
Germany	--	--	17,600	51,700	853	103,000
Ireland	--	--	12,200	193,000	--	--
Japan	400	25,100	2,690	46,500	1,340	50,300
Sweden	--	--	--	--	35	3,270
United Kingdom	--	--	34,700	334,000	5,660	352,000
Total	675	42,800	91,800	856,000	12,400	1,060,000
January-August	21,600	843,000	530,000	5,340,000	160,000	11,300,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2004:								
August	289,000	\$7,150,000	41,100	\$2,060,000	66,200	\$683,000	334,000	1,920,000
September	118,000	5,300,000	2,450	66,300	29,100	270,000	127,000	2,050,000
October	127,000	4,700,000	20,100	671,000	12,700	136,000	145,000	2,190,000
November	119,000	5,750,000	20,700	693,000	125,000	360,000	164,000	2,360,000
December	130,000	4,350,000	7,690	180,000	56,000	381,000	149,000	2,500,000
January-August	1,620,000	59,300,000	273,000	12,200,000	443,000	4,340,000	1,920,000	XX
January-December	2,110,000	79,400,000	324,000	13,800,000	666,000	5,490,000	2,500,000	XX
2005:								
January	122,000	5,590,000	27,300	596,000	59,600	398,000	156,000	156,000
February	120,000	3,990,000	52,200	1,610,000	118,000	363,000	186,000	342,000
March	107,000	4,650,000	57,500	1,260,000	145,000	489,000	183,000	525,000
April	154,000	6,380,000	36,900	862,000	36,500	380,000	189,000	714,000
May	207,000	5,980,000	93,500	2,250,000	36,600	205,000	283,000	998,000
June	170,000	5,710,000	107,000	1,860,000	26,300	217,000	254,000	1,250,000
July	174,000	5,280,000	39,700	818,000	75,200	621,000	221,000	1,470,000
August	170,000	5,560,000	25,500	581,000	18,900	137,000	193,000	1,660,000
January-August	1,220,000	43,100,000	440,000	9,840,000	517,000	2,810,000	1,660,000	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES¹

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ²	Quantity	Value ²
2004:				
August	135,000	\$4,480,000	47,000	\$568,000
September	69,000	3,720,000	2,500	96,800
October	107,000	5,210,000	12,700	134,000
November	119,000	5,090,000	34,800	213,000
December	85,300	4,620,000	25,300	60,100
January-August	767,000	29,700,000	842,000	20,100,000
January-December	1,150,000	48,400,000	917,000	20,600,000
2005:				
January	184,000	6,490,000	69,000	2,800,000
February	235,000	8,710,000	8,390	254,000
March	147,000	6,540,000	40,700	556,000
April	184,000	6,530,000	33,000	818,000
May	129,000	6,080,000	49,200	1,300,000
June	230,000	9,230,000	36,200	1,200,000
July	224,000	8,410,000	--	--
August	213,000	7,950,000	242,000	1,870,000
January-August	1,550,000	59,900,000	479,000	8,790,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.